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Overcoming Barriers to the National Produce Market: The Georgia Case

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The early part of the twentieth century brought with it major changes and innovations in agriculture including fruits and vegetables. With improved transportation and methods to reduce spoilage of perishable commodities came a shift from the decentralized systems of old to newer central production and marketing centers (Free 1979). Meanwhile, new market outlets where produce was brought together on a wholesale level began to spring up in large metropolitan areas (Epperson and McHugh 1985). The wholesale sector in the fresh produce industry began to flourish through these centralized sites. Marketing and distribution innovations led to the development of large production areas in the United States with commodity specialization (Free 1979).

Mainstream production in the Southeast centered in Florida while Georgia was one of the many areas largely excluded. However, in the early 1970s produce production began moving north from Florida into South Georgia (Epperson and Tyan 1984; Epperson and Lei 1988).

Several factors have been linked to the growth of the produce industry in Georgia. A major factor has been urban encroachment resulting in the loss of vast areas of agricultural land in Florida (Lockette 2004; Reynolds 2001). As with North Florida, South Georgia has a mild climate suitable for growing produce, but unlike Florida, is sparsely populated (Epperson and Tyan 1984; Epperson and Lei 1988). Another factor boosting growth has been the tremendous increase in demand for produce in the United States and beyond, which largely parallels the release and promotion of dietary guidelines by the USDA (Epperson and Tyan 1984; Epperson and McHugh 1985; Epperson and Lei 1988). In recent

years, the increased popularity of pre-cut vegetables and the growth in the variety of vegetables has contributed to the expansion in vegetable consumption (Estes and Smith 1996).

This study examines factors contributing to the development of the produce industry in Georgia and finds ways to overcome barriers to entry into the national fresh fruit and vegetable market. A survey of fruit and vegetable growers in Georgia was conducted in 2003–2004. Total enumeration of commercial produce growers in Georgia was attempted. The survey was distributed by mail and followed-up by phone and personal interviews. A total of 300 surveys were distributed and 67 completed, a response rate of 22 percent. Information obtained from the respondents included economic and operational characteristics of grower enterprises. Additional information was ascertained about factors limiting production, expected operational changes, and marketing practices.

Survey Results

Nearly 42 percent of respondents were over 50 years of age. For sales below \$100,000, there was a higher concentration of growers under 41 years of age. For the categories of \$100,000 and above in sales, only four respondents were under 41 years of age.

Most producers had more than 10 years of experience commercially growing produce. Generally, larger producers had more experience than smaller ones.

Almost 80 percent of those surveyed grew row crops such as corn, soybeans, and peanuts. Nearly 36 percent had livestock enterprises, and 21 percent grew tobacco. No clear pattern between non-produce enterprises and sales from produce emerged.

Overall, the respondents were almost equally divided on whether or not to expand produce production. However, just over two-thirds of the smaller respondents were not interested in expanding production.

The preferred source of information on growing a new crop was the local Extension Service. Other

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growers and buyers were also very common resources. Smaller growers relied on grower organizations more than larger growers did (Table 1). Larger growers seemed to have a stronger relationship with buyers as a source of information. Over one-third of the larger producers also used information from the State Department of Agriculture, while only about 10 percent of the smaller producers used this source.

A diverse array of fruits and vegetables was grown by the respondents. The largest sales category (\$500,000 and over) accounted for over 80 percent, or almost 10,000 acres, of total fruit and vegetable production. However, for the two lowest sales classes, watermelon production was found to be uniquely important, accounting for just over 80 percent of total acreage.

Price received was reportedly the most limiting factor to the expansion of produce operations. For small farms the important limiting factors were harvest labor, price, and weather. For large farms, price, harvest labor, and credit availability were the three most limiting factors.

Across the board, price, market outlet, weather, and harvest-labor availability appear to be the primary factors limiting expansion. However, for the larger operations, land, labor housing, and credit rationing seem to be just as important.

Producers were asked about participation in certain activities thought to be linked to productive and efficient operations. Trade shows, grower organizations, new varieties, and market-news publications all had response levels in excess of 60 percent. The results show that as sales increased, participation rates for attending trade shows, trying new varieties, and practicing integrated pest management (IPM) increased markedly.

Direct markets (farmers markets, roadside stands, and pick-your-own) were the most common outlets for produce, indicated by nearly 44 percent of the respondents. In the under-\$20,000 class, two-thirds of all sales were to direct-market outlets (Table 2). This was expected since these outlets in the past have been used by small-volume producers as a convenient way to sell produce. For the

Table 1. Number of Responses by Sources of Information for Growing a New Crop by Sales From Produce.

Information sources	Under \$20,000	\$20,000-\$49,999	\$50,000-\$99,999	\$100,000-\$249,999	\$250,000-\$499,999	\$500,000 or more
Farm bureau	1(5.26%)	1(9.09%)	0(0.00%)	2(12.50%)	1(16.67%)	0(0.00%)
Another grower	8(42.11%)	6(54.55%)	2(100.00%)	8(50.00%)	2(33.33%)	5(45.45%)
Extension service	16(84.21%)	8(72.73%)	1(50.00%)	14(87.50%)	4(7.84%)	8(72.73%)
Input supplier	4(21.05%)	2(18.18%)	0(0.00%)	8(50.00%)	2(33.33%)	3(27.27%)
Buyer	6(31.58%)	4(36.36%)	1(50.00%)	4(25.00%)	3(50.00%)	9(81.82%)
Internet	2(10.53%)	2(18.18%)	0(0.00%)	3(18.75%)	0(0.00%)	3(27.27%)
Grower organization	8(42.11%)	7(63.64%)	0(0.00%)	4(25.00%)	2(33.33%)	0(0.00%)
State Dept. of Ag.	2(10.53%)	1(9.09%)	0(0.00%)	3(18.75%)	2(33.33%)	4(36.36%)
Farm service agency	3(15.79%)	2(18.18%)	0(0.00%)	1(6.25%)	1(16.67%)	1(9.09%)
No one	1(5.26%)	0(0.00%)	0(0.00%)	1(6.25%)	0(0.00%)	0(0.00%)
Respondents	19	11	2	16	6	11

Note: Percentages are based on number of respondents by sales category, n=65. Multiple responses were possible.

Table 2. Average Percentage of Produce Sales by Outlet for all Respondents by Sales From Produce.

Outlet	Under \$20,000	\$20,000–\$49,999	\$50,000–\$99,999	\$100,000–\$249,999	\$250,000–\$499,999	\$500,000 or more
Direct markets	65.58%	49.00%	17.50%	45.31%	29.17%	10.50%
Direct to retailers	4.71%	4.00%	37.50%	3.44%	1.67%	37.10%
Cooperative/marketing association	7.65%	7.00%	0.00%	7.81%	0.00%	0.00%
Wholesale (non-cooperative) market	13.82%	30.00%	20.00%	19.06%	15.00%	29.20%
Processor	5.88%	0.50%	5.00%	7.50%	30.83%	2.20%
Direct to local restaurants	0.00%	0.50%	0.00%	1.88%	3.33%	1.10%
Internet	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%
Shipper/packer	1.77%	9.00%	10.00%	12.50%	20.00%	11.00%
Community supported agriculture ^a	0.53%	0.00%	10.00%	2.50%	0.00%	8.70%
Auctions	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

^a Community supported agriculture offers members a share, or subscription, in the produce of participating farms. Members pay an annual fee and in return receive a mixed box of produce throughout the growing season.

largest growers, only 10.5 percent of produce sales were to direct markets, while 37 percent went directly to retailers.

The use of a hiring service to secure workers was used mostly by the larger producers. The highest sales class (\$500,000+) had the highest response level at 36 percent.

Almost eight of every 10 of those surveyed owned a computer. Use of the Internet does not appear to differ by size of operation.

As sales increased, the percentage of respondents expecting a decrease in direct marketing increased as well. Just over 36 percent with \$500,000 or more in sales expected a decrease in direct marketing, as opposed to only 10.5 percent for the under-\$20,000 category.

Experience was the overwhelming top factor in deciding what to grow. In the under-\$20,000 group, about 26 percent answered that market access was a factor in deciding what to grow, reflecting a direct-marketing orientation (Table 3). Small producers, for the most part, seem to have a local, direct-marketing orientation, which encompasses outlets rather easily accessed but limited in sales potential.

Nearly 64 percent of respondents in the largest sales class indicated that risk was a deciding factor in what to grow. No more than 27 percent of the respondents in any other sales class indicated that risk was a consideration. Large producers likely have more to lose than do small producers, and thus have a greater incentive to consider the risk factor.

The most frequently indicated potential source of marketing information was a broker/wholesaler (more than 71 percent). Responses for the broker/wholesaler ranged from almost 53 percent for the lowest sales class to more than 72 percent for the others (Table 4).

When contemplating growing a new crop, the most important factors for smaller produce growers were market location and transportation. These factors became less important as operations grew in size, while factors such as buyer-seller relationships, meeting buyer standards, and grading became more important. Such factors are of paramount importance for accessing the national distribution system via selling to wholesalers, through brokers, and to retail chains.

In the \$500,000-and-above sales class, more

Table 3. Number of Responses by Factor Used in Deciding What to Grow by Sales From Produce.

Factor	Under \$20,000	\$20,000–\$49,999	\$50,000–\$99,999	\$100,000–\$249,999	\$250,000–\$499,999	\$500,000 or more
Experience	13(68.42%)	8(72.72%)	2(100.00%)	14(87.50%)	6(100.00%)	8(72.72%)
Production expertise	9(47.37%)	7(63.64%)	2(100.00%)	11(68.75%)	4(66.67%)	5(45.45%)
Market access	5(26.32%)	7(63.64%)	2(100.00%)	9(56.25%)	4(66.67%)	8(72.72%)
Labor timing/availability	7(36.84%)	4(36.36%)	1(50.00%)	7(43.75%)	3(50.00%)	5(45.45%)
Risk	2(10.53%)	3(27.27%)	0(0.00%)	3(18.75%)	1(16.67%)	7(63.64%)
Price	4(21.05%)	6(54.55%)	1(50.00%)	9(56.25%)	3(50.00%)	6(54.55%)
Profit potential	10(52.63%)	8(72.72%)	1(50.00%)	10(62.50%)	2(33.33%)	7(63.64%)
Equipment needs	5(26.32%)	1(9.09%)	1(50.00%)	2(12.50%)	3(50.00%)	3(27.27%)
Respondents	19	11	2	16	6	11

Note: Percentages are based on number of respondents by sales category, n=65. Multiple responses were possible.

Table 4. Number of Responses by Potential Source of Marketing Information for a New Crop by Sales From Produce.

Source	Under \$20,000	\$20,000–\$49,999	\$50,000–\$99,999	\$100,000–\$249,999	\$250,000–\$499,999	\$500,000 or more
Farm bureau	1(5.26%)	0(0.00%)	0(0.00%)	1(6.25%)	0(0.00%)	0(0.00%)
Another grower	7(36.84%)	3(27.27%)	2(100.00%)	9(56.25%)	3(50.00%)	1(9.09%)
Extension service	10(52.63%)	6(54.55%)	1(50.00%)	9(56.25%)	4(66.67%)	2(18.18%)
Input supplier	1(5.26%)	2(18.18%)	0(0.00%)	1(6.25%)	2(33.33%)	1(9.09%)
Broker/wholesaler	10(52.63%)	8(72.72%)	2(100.00%)	13(81.25%)	4(66.67%)	9(81.81%)
Grower organization	9(47.37%)	4(36.36%)	0(0.00%)	3(18.75%)	2(33.33%)	1(9.09%)
State Dept. of Ag.	1(5.26%)	0(0.00%)	0(0.00%)	3(18.75%)	0(0.00%)	3(27.27%)
Cooperative	2(10.53%)	3(27.27%)	0(0.00%)	2(12.50%)	1(16.67%)	0(0.00%)
No one	3(15.79%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	1(9.09%)
Respondents	19	11	2	16	6	11

Note: Percentages are based on number of respondents by sales category, n=65. Multiple responses were possible.

than 90 percent of those surveyed considered themselves grower-shippers. However, in the under-\$20,000 class only one of 19 considered themselves a grower-shipper. These results were expected, as grower-shippers are typically larger, more complex operations tied into the national distribution system.

More than 72 percent of the respondents indicated packing produce, which can be construed as anything from simply placing produce items in containers for transport to local markets to grading and packing for shipment to the national market. At the low end of the sales range, more than 52 percent of those surveyed responded that they did not pack produce. This was as expected, as smaller producers using direct marketing outlets are largely able to forego the grading and packing operation.

Outsourcing of marketing activities such as selling, grading, packing, and cooling was not found to be prevalent. Most of the outsourcing of the selling function was by producers in the \$500,000-or-more sales class.

The top three types of post-harvest equipment used were boxes, sorting tables, and washing equipment. In general, responses for the use of almost all types of post-harvest equipment increased with higher levels of sales.

Responses about increasing and decreasing market opportunities for produce over the next five years were somewhat limited. No responses indicated an expected decrease. Berries, as a general category, were believed to have the most potential for increased market opportunities.

In the situation where a food-borne illness or some other catastrophic event occurs via produce shipments, traceback may become important in tracking the source of the commodities in question. About 89 percent of those in the under-\$20,000 sales class did not think that traceback would affect their operations. At the other end of the sales spectrum, almost 64 percent indicated they were expecting an impact; larger producers who market through the national produce-distribution system appear to be concerned that those they largely supply—wholesalers and retail chains—will be forced to adopt traceback in the near future. The likely impact of traceback on grower-shippers will be twofold: higher operating costs and lower prices received for produce.

The survey dealt with certain costly practices of sophisticated producers. Respondents were asked

if they had in place product-liability insurance, product lookup (PLU) coding, and integrated pest management (IPM). Only about 16 percent of the respondents in the under-\$20,000 sales class had product-liability insurance, while almost 82 percent of those in the \$500,000-or-more class had the insurance. None of the respondents in the under-\$20,000 class had incorporated placement of PLU code stickers, while almost 73 percent of those in the \$500,000-or-more class had already done so. Clearly, these practices are associated with larger firms.

All respondents participating in the survey were involved in multiple farming enterprises. The mode or most-common sales category for produce was under \$20,000. The median or middle of the produce sales distribution was \$100,000–\$249,999. The mode and median for the sales distribution for all farming enterprises combined were equal and much higher, at \$500,000–\$749,999. The correlation between sales from produce and sales from all farming enterprises combined was fairly high and positive (0.63). This is an indication that larger operations, in general, are more likely to be able to engage resources, knowledge, and networking to access the national produce-marketing system.

Conclusions

Successful produce growers in Georgia—those who sell in the national market and beyond—are more likely to be a grower-shipper, have considerable experience, attend trade shows and try new crop varieties, use marketing information from the State Department of Agriculture for new crops, use a hiring service for labor, emphasize risk in production decisions, use sophisticated production and post-harvest practices and equipment, be concerned about the economic consequences of proposed traceback regulations, and be concerned foremost with buyer-seller relationships, meeting buyer standards, new-crop direction from buyers, and grading precision. In short, factors found important in overcoming barriers to national market entry stem from the degree of specialization and sophistication of producers.

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